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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,882	11/18/2003	Stephen Moffitt	2839/101	3699

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EXAMINER

NGUYEN, KIMBINH T

ART UNIT PAPER NUMBER

2671

DATE MAILED: 12/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/715,882	Applicant(s) MOFFITT ET AL.	
	Examiner Kimbinh T. Nguyen	Art Unit 2671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Claims 1-20 are pending in the application.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5, 7-10 and 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirkland (5,986,669) in view of Taylor et al. (6,967,664).

**Claim 1**, Kirkland discloses processing a primitive for potential display, the primitive having associated attribute data and position data (attributes associated with the initial vertices; abstract; col. 2, line 66 through col. 3, line 1), comprising: assembling the primitive as a function of the positional data (abstract: after each instance of clipping, the primitive becomes a resulting primitive defined by a modified set of attributes associated with the modified set of vertices); Taylor et al. teaches determining if the primitive is incapable of being viewable in the graphical image on the display device (a trivial discard guard band: the vertices of graphics primitives to determine whether the graphics primitives can be trivially discarded; col. 2, line 63 through col. 3, line 6); and causing at least a portion of the attribute data to be received by a graphics processor (primitive processor) as a function of whether the primitive is incapable of being viewable in the graphical image on the display device (col. 4, line 64 through col. 6, line 31). It would have been obvious to one of ordinary skill in the art at

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the time the invention was made to incorporate processing graphics primitives that includes a trivial discard guard band (incapable of being viewable) taught by Taylor into a primitive processing of Kirkland for saving processing time, because it would be making processing determinations for graphics primitive such that unnecessary processing operations are avoided and those processing operations that are performed are performed in an efficient manner (col. 5, lines 28-32).

**Claim 2**, Kirkland discloses causing at least a portion of the attribute data to be received by the graphics processor if the primitive is not determined to be incapable of being viewable in the graphical image on the display device (col. 5, lines 24-30).

**Claim 3**, Kirkland discloses the attribute data is not received by the graphics processor if the primitive is determined to be incapable of being viewable in the graphical image on the display device (col. 5, lines 30-47).

**Claim 4**, Kirkland discloses determining includes performing culling operations to the assembled primitive (col. 3, lines 51-53).

**Claim 5**, Taylor et al. discloses storing the attribute data in memory (memory 84) that is external to the graphics processor, causing including causing the attribute data to be forwarded from the memory to the graphics processor (primitive processor) as a function of whether the primitive is incapable of being viewable in the graphical image on the display device (col. 4, line 64 through col. 5, line 9). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate primitive processor taught by Taylor into a primitive processing of Kirkland to perform primitive processing, because it would be making processing determinations for

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graphics primitive such that unnecessary processing operations are avoided and those processing operations that are performed are performed in an efficient manner (col. 5, lines 28-32).

**Claim 7**, Taylor et al. discloses the graphics processor rasterizes the assembled primitive if it receives the attribute data (col. 7, lines 49-61).

**Claims 8-10, 12-20**, the rationale provided in the rejection of claims 1-7 are incorporated herein.

4. Claims 6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirkland (5,986,669) in view of Taylor et al. (6,967,664) and further in view of Duluk, Jr. Et al. (6,664,959).

**Claims 6 and 11**, Duluk, Jr. Et al. discloses assembling includes forwarding a pointer to the graphics processor, the pointer pointing to memory capable of storing the positional data (col. 18, lines 46-50); primitive pre-processor includes a culling module (Z cull unit; col. 15, lines 46-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate pointer and culling module taught by Duluk, Jr. into a primitive processing of Kirkland to perform primitive processing, because it would provide structure and method for a hidden surface removal system (col. 15, lines 46-47).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimbinh T. Nguyen whose telephone number is (571) 272-7644. The examiner can normally be reached on Monday to Thursday from 7:00

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AM to 4:30 PM. The examiner can also be reached on alternate Friday from 7:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached at (571) 272-7782. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

December 9, 2005



**KIMBINH T. NGUYEN**  
**PRIMARY EXAMINER**